NC/QC/YD/2019-20/PH1-W1 Date: 06-11-2019

TEST REPORT ON WET MIX MACADAM MIX
(GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.
{Project*: Filling of pot holes Main & Cross roads in Dasarahalli Ward No.15.}
Ref.: Material testing/PMC/19-20,
Report Required for: Assistant Executive Engineer,
Dasarahalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Gnanendra Murthy M.D, Bangalore.

TEST RESULTS

1. Gradation Test:
TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, V Revision-2013
53.00	**100.00**	100
45.00	**96.15**	95-100
26.50	---	-
22.40	**74.25**	60-80
11.20	**52.40**	40-60
4.75	**34.15**	25-40
2.36	**22.60**	15-30
0.600	**18.35**	8-22
0.075	**3.85**	0-5

For Newzen Consultants Bangalore
Proprietor

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

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Date: 06-11-2019

TABLE 1.2

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)– 1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	**27.84%**	Not more than 30.00 %
2.	Combined Flakiness and Elongation index, %	**28.39%**	Not more than 35.0 %
3.	Water absorption, %	**0.42 %**	Not more than 2.0 %
4.	Plasticity Index, %	**NP**	Not more than 6.0 %

For Newzen Consultants Bangalore

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA, JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

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NC/QC/YD/2019-20/PH1-W2 Date: 11-11-2019

TEST REPORT ON WET MIX MACADAM MIX

(GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.
{Project*: Filling of pot holes Main & Cross roads in Dasarahalli Ward No.15.}
Ref.: Material testing PMC/19-20.
Report Required for: Assistant Executive Engineer,
Dasarahalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Gnanendra Murthy M.D, Bangalore.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, V Revision-2013
53.00	100.00	100
45.00	97.35	95-100
26.50	---	-
22.40	72.15	60-80
11.20	54.10	40-60
4.75	32.45	25-40
2.36	25.60	15-30
0.600	19.05	8-22
0.075	3.20	0-5

For Newzen Consultants Bangalore

Proprietor

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

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Date: 11-11-2019

TABLE 1.2

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)– 1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	**27.58%**	Not more than 30.00 %
2.	Combined Flakiness and Elongation index, %	**28.73%**	Not more than 35.0 %
3.	Water absorption, %	**0.42 %**	Not more than 2.0 %
4.	Plasticity Index, %	**NP**	Not more than 6.0 %

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA, JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 232401S7
EMAIL:newzen576@gmail.com

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NC/QC/YD/2019-20/PH1-W3 Date: 16-11-2019

TEST REPORT ON WET MIX MACADAM MIX

(GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.
{Project*: Filling of pot holes Main & Cross roads in Dasarahalli Ward No.15.}
Ref.: Material testing/PMC/19-20,
Report Required for: Assistant Executive Engineer,
Dasarahalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Gnanendra Murthy M.D, Bangalore.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, V Revision-2013
53.00	**100.00**	100
45.00	**97.40**	95-100
26.50	**---**	-
22.40	**72.15**	60-80
11.20	**54.25**	40-60
4.75	**36.65**	25-40
2.36	**23.80**	15-30
0.600	**17.30**	8-22
0.075	**4.15**	0-5

For Newzen Consultants Bangalore

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JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

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Date: 16-11-2019

TABLE 1.2

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)– 1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & MoRTH Specification, V Revision -2013.
1.	Aggregate Impact Value	**27.63%**	Not more than 30.00 %
2.	Combined Flakiness and Elongation index, %	**28.39 %**	Not more than 35.0 %
3.	Water absorption, %	**0.42%**	Not more than 2.0 %
4.	Plasticity Index, %	**NP**	Not more than 6.0 %

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JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

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NC/QC/YD/2019-20/PH1-BB1 Date: 13-11-2019

1. TEST REPORT ON BITUMEN SAMPLE:

Sub: Testing of Bitumen sample VG-30 Grade
{Project* Filling of pot holes Main & Cross roads in Dasarahalli Ward No.15.}
Ref. Material testing PMC 19-20.
Report Required for: Assistant Executive Engineer,
Dasarahalli Sub Division,
BBMP, Bangalore.
Name of the Agency /Contractor*: Sri Gnanendra Murthy M.D, Bangalore.
Technical Reference: Ministry of Road Transport and Highways, V Revision, 2013 and IS 73: 1992.

TABLE 1.1 ;

SL No	Details	Test Results	Requirements as per I.S 73 -1992 Specifications
1.	Penetration at 25° C	51.40° C	Min. 45
2.	Ductility Value at 25° C	109.0 cm	40
3.	Flash point	236° C	Minimum 220° C
4.	Softening point	50.40° C	Min. 47

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JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

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NC/QC/YD/2019-20/PH1-CB1 Date: 13-11-2019

1. TEST REPORT ON COARSE AGGREGATE:

Sub: Testing of Coarse Aggregate used in Bituminous Concrete.
{Project*: Filling of pot holes Main & Cross roads in Dasarahalli Ward No.15.}
Ref.: Material testing/PMC/19-20,
Report Required for: Assistant Executive Engineer,
Dasarahalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Gnanendra Murthy M.D, Bangalore.

TABLE 1.1 ;

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)– 1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	**22.86 %**	Not more than 24.00 %
2.	Combined Flakiness and Elongation index, %	**27.54 %**	Not more than 35.0 %
3.	Water absorption, %	**0.42%**	Not more than 2.0 %
4.	Specific gravity	**2.62**	-------
5.	Soundness	**5.36%**	Max. 12 % in Sodium Sulphate

For Newzen Consultants Bangalore
Director

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

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NC/QC/YD/2019-20/PH1-BC1 Date: 21-11-2019

1.TEST REPORT ON BITUMINOUS MIXES :
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.
{Project*: Filling of pot holes Main & Cross roads in Dasarahalli Ward No.15.}
Ref.: Material testing/PMC/19-20,
Report Required for: Assistant Executive Engineer,
Dasarahalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Gnanendra Murthy M.D, Bangalore.

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**
1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.41 %**

2. **Gradation Test**
TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	**100**	100
13.2	**98.25**	90-100
9.5	**84.10**	70-88
4.75	**63.50**	53-71
2.36	**53.25**	42-58
1.18	**45.35**	34-48
0.600	**32.75**	26-38
0.300	**25.60**	18-28
0.150	**17.25**	12-20
0.075	**8.15**	4-10

For Newzen Consultants Bangalore
Proprietor

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

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NC/QC/YD/2019-20/PH1-BS1

Date: 22-11-2019

1.TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.
{Project*: Filling of pot holes Main & Cross roads in Dasarahalli Ward No.15.}
Ref.: Material testing/PMC/19-20,
Report Required for: Assistant Executive Engineer,
Dasarahalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Gnanendra Murthy M.D, Bangalore.

TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	**1368**	900
2	Marshall Flow at 60°C, mm.	**3.46**	2.0 - 4.0

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JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

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NC/QC/YD/2019-20/PH1-BC2 Date: 25-11-2019

1.TEST REPORT ON BITUMINOUS MIXES :
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.
{Project*: Filling of pot holes Main & Cross roads in Dasarahalli Ward No.15.}
Ref.: Material testing/PMC/19-20,
Report Required for: Assistant Executive Engineer,
Dasarahalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Gnanendra Murthy M.D, Bangalore.

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**
1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.42%**

2. **Gradation Test**
TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	**100**	100
13.2	**96.25**	90-100
9.5	**82.10**	70-88
4.75	**65.45**	53-71
2.36	**51.80**	42-58
1.18	**39.70**	34-48
0.600	**31.50**	26-38
0.300	**23.60**	18-28
0.150	**18.25**	12-20
0.075	**7.40**	4-10

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JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

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NC/QC/YD/2019-20/PH1-BS2 Date: 26-11-2019

1.TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.
{Project*: Filling of pot holes Main & Cross roads in Dasarahalli Ward No.15.}
Ref.: Material testing/PMC/19-20,
Report Required for: Assistant Executive Engineer,
Dasarahalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Gnanendra Murthy M.D, Bangalore.

TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	**1352**	900
2	Marshall Flow at 60°C, mm.	**3.40**	2.0 - 4.0

For Newzen Consultants Bangalore
Principal

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

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NC/QC/YD/2019-20/PH1-BC3 Date: 30-11-2019

1.TEST REPORT ON BITUMINOUS MIXES :
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.
{Project*: Filling of pot holes Main & Cross roads in Dasarahalli Ward No.15.}
Ref.: Material testing/PMC/19-20,
Report Required for: Assistant Executive Engineer,
Dasarahalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Gnanendra Murthy M.D, Bangalore.

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**
1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.41 %**

2. **Gradation Test**
TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	**100**	100
13.2	**97.65**	90-100
9.5	**85.30**	70-88
4.75	**62.95**	53-71
2.36	**55.40**	42-58
1.18	**40.70**	34-48
0.600	**33.05**	26-38
0.300	**25.35**	18-28
0.150	**14.75**	12-20
0.075	**6.20**	4-10

For Newzen Consultants Bangalore
Proprietor

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

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NC/QC/YD/2019-20/PH1-BS3

Date: 02-12-2019

1.TEST REPORT ON BITUMINOUS MIXES :

(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.
{Project*: Filling of pot holes Main & Cross roads in Dasarahalli Ward No.15.}
Ref.: Material testing/PMC/19-20,
Report Required for: Assistant Executive Engineer,
Dasarahalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Gnanendra Murthy M.D, Bangalore.

TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	**1346**	900
2	Marshall Flow at 60°C, mm.	**3.49**	2.0 - 4.0

For Newzen Consultants Bangalore

Proprietor

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

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